



North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
701-328-2750 • TDD 701-328-2750 • FAX 701-328-3696 • INTERNET: <http://swc.nd.gov>

Agenda #1

MEMORANDUM

TO: Governor John Hoeven
Members of the State Water Commission
FROM: *DLF* Dale L. Frink, State Engineer
SUBJECT: SWPP Project Update
DATE: May 17, 2010

Oliver, Mercer, North Dunn Regional Service Area

Contract 2-8A Main Transmission Line to Hazen: Titus Excavating began work on this contract last September and shut down for the winter in early December. Work resumed the second week of April. Roughly nine miles of the 23 miles on the contract remained to be installed as of May 14th. The substantial completion date of June 1st is likely to be extended.

Contract 3-1C OMND Water Treatment Plant Membrane Procurement: This contract was awarded to and executed with Wigen Water Technologies in 2009. Meetings have been held with Wigen and membrane supplier Toray Industries. Submittals have been received and the designs of the skids, ancillary equipment such as clean in place tanks, neutralization tanks, etc. have been refined. The membrane equipment will be delivered during construction of the plant and installed by the building contractor with supervision by Wigen and Toray.

Contract 3-1D OMND Water Treatment Building and Membrane Equipment Installation: Design continues on the water treatment plant. The water treatment process design is complete, as is the structural design. We have met with an architect to review the design to ensure compliance with applicable building codes and to generally streamline the process. AECOM is currently working on the electrical and mechanical design. Work is also progressing on the concentrate disposal line, which will take the reject water from the reverse osmosis units back to the lake. We also intend to build an auxiliary concentrate evaporation pond to use while the concentrate disposal line is down for maintenance.

Contract 2-8B Main Transmission Line from Hazen to Stanton and Beulah to Center Elevated Tank: This contract was bid May 12 and will be covered in separate memorandum. The easement work has started on the alignment and is progressing acceptably.

Contract 5-15A Zap Potable Reservoir: This contract will be bid May 19 and is covered in a separate memorandum for the June 1st State Water Commission meeting.

An option has been secured for a site for the Center elevated reservoir. The site will be purchased pending survey and geotechnical investigation.

Medora Beach Regional Service Area

Record drawings have been completed for the contracts bid in 2008 and constructed in 2008 and 2009. Final punch lists are being completed and quantities are being finalized with the contractors. The contracts should be closed out in the near future. Seeding is underway on the Killdeer Mountain and Grassy Butte Service Areas. Ten bids were received for the seeding contract and the contract was awarded to Piper Land Resource Management of Davenport, ND. Average seeding costs is \$164 per acre.

Oil Industry Water Use

State Water Commission staff and legal council have approved a water service contract with Missouri Basin Well Service to sell water to a depot near Sentinel Butte. Water will only be available to this site at a rate of 50 gallons per minute due to other demands on the distribution system in the area. The depot location goes before the zoning committee on the 21st of this month.

Contract 4-1D Dodge Water Depot contract was bid in April and awarded to Mike's Excavation of Dickinson, ND. The submittals have been received and the substantial completion date is June 15, but the contractor expects to be done a week early. This site will have 1,000 gallons per minute capacity. The zoning, land lease, and design for this depot are complete and construction will commence upon execution of the water service contract.

A meeting was held in Bismarck May 12th between the State Water Commission staff, representatives from the Southwest Water Authority, representatives from the Department of Mineral Resources, Petroleum Council, and industry to discuss additional water supplies for the oil industry. A matrix comparing water availability and costs will be developed for delivering water from the new water treatment plant to near Killdeer. A main transmission line, Contract 2-8E, is planned to deliver water to the Killdeer Mountain area and north Dunn County regardless of oil activity. The option under consideration will be to move construction of that section of pipeline from 2013-2015 ahead to coincide with completion of the treatment plant and upgrade the capacity to serve oil industry needs. Many factors, including but not limited to: water treatment plant capacity, intake capacity, pumping capacity, reservoir capacity, and funding sources will need to be taken into account to determine possible schedules and costs.

DLF:TJF/1736



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Agenda #2)

MEMORANDUM

TO: Governor John Hoeven
Members of the State Water Commission
FROM: Dale L. Frink, State Engineer
SUBJECT: SWPP Contract 2-8B
DATE: May 17, 2010

Southwest Pipeline Project Contract 2-8B Main Transmission Line from Hazen to Stanton and Beulah to Center Tank consists of furnishing and installing 33 miles of 14" to 6" PVC gasketed joint pipe, one pressure reducing valve vault, one prefabricated meter vault, one prefabricated VFD Booster Station, road crossings, connection to the City of Stanton, and other related appurtenances.

Bids were opened May 12th. Twelve bids were received and are summarized below.

	Total Base Bid	Amount above low
Engineer's Estimate	\$4,757,362.50	\$869,267.50
Kamphuis Pipeline Co. , Grand Rapids, MI	\$3,888,095.00	\$-
Wagner Construction , South International Falls, MN	\$4,118,368.00	\$230,273.00
Carstensen Contracting , Pipestone, MN	\$4,216,628.25	\$328,533.25
American Infrastructure , Franktown, Co	\$4,273,020.00	\$384,925.00
Kvamsdal Construction , Willmar, MN	\$4,372,800.00	\$484,705.00
Titus Excavating , Bismarck, ND	\$4,418,002.00	\$529,907.00
SJ Louis , Rockville, MN	\$4,772,500.00	\$884,405.00
Northern Improvement , Bismarck, ND	\$4,933,689.00	\$1,045,594.00
Geo Haggart, Inc. , Fargo, ND	\$5,035,317.50	\$1,147,222.50
Morris, Inc. , Fort Pierre, SD	\$5,651,165.31	\$1,763,070.31
K.R. Swerdfeger Construction , Pueblo West, CO	\$5,133,268.00	\$1,245,173.00
Swanberg Construction , Valley City, ND	\$5,895,190.00	\$2,007,095.00

Kamphuis Pipeline Co., which has worked with Bartlett & West in South Dakota and has extensive pipeline installation experience on other regional water systems, was the apparent low bidder. The project appears to have benefited from a highly competitive market with an unusually high number of bidders, which is fortunate as PVC pipe prices are roughly 25 percent higher than last year.

Bartlett & West are reviewing the bids and have not yet issued a recommendation to award. A recommendation will be provided at the State Water Commission meeting June 1st to award the contract.

DLF:TJF/1736



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Agenda 43)

MEMORANDUM

TO: Governor John Hoeven
Members of the State Water Commission
FROM: *DLF* Dale L. Frink, State Engineer
SUBJECT: SWPP Contract 5-15A
DATE: May 17, 2010

Southwest Pipeline Project Contract 5-15A Zap Potable Reservoir generally consists of furnishing and installing a single 1,450,000 gallon welded steel or glass-coated bolted steel water storage reservoir, complete with inlet/outlet piping, underdrain system, drain and overflow discharge piping, foundation sitework, outlet structure and other appurtenant items. The reservoir size is 94 feet diameter by 28 feet high and will be located at site of the Oliver, Mercer, North Dunn Water Treatment Plant and current raw water reservoirs. This reservoir will serve as the clearwell for the treatment plant. Bids will be opened May 19th and a recommendation to award will be provided at the June 1st State Water Commission meeting. This contract will be funded with fiscal year 2009 MR&I allocation to the Southwest Pipeline Project.

DLF:TJF/1736



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Agenda #1

MEMORANDUM

TO: Governor John Hoeven
FROM: *Dale Frink* Members of the State Water Commission
SUBJECT: Dale Frink, State Engineer
Devils Lake Hydrologic Update
DATE: May 17, 2010

The water surface elevation on May 12, 2010 for Devils Lake was 1,451.63 ft-msl and Stump Lake was 1,451.32 ft-msl. Since March 1, 2010, Devils Lake has gone up by 1.54 feet, and Stump Lake has increased by 1.19 feet. The combined storage of Devils Lake and Stump Lake for May 12, 2010 was 3.65 million ac-ft. This is 257,400 ac-ft more for both lakes than on March 1, 2010. Devils Lake is 1.69 feet higher and Stump Lake is 1.91 feet higher than the May 12, 2009 elevation. The storage of both lakes is 290,900 ac-ft greater than on May 12, 2009.

The total surface area of both lakes on May 12, 2010 was 178,300 acres. That is an increase in surface area of 16,200 acres since May 12, 2009 and an increase of 14,600 acres since March 1, 2010.

The National Weather Service has provided the long range probabilistic forecast for Devils Lake and Stump Lake. The estimated values are valid for the time period of May 12, 2010 through September 30, 2010. The volume of water required to raise the lake to each level from the January 2010 water surface elevation is given. The volume increase in 2009 from January 1st to the peak level on June 27th was 556,300 ac. ft. The volume increase so far this year from January is 272,700 ac. ft.

Chances of Devils Lake and Stump Lake rising above the given lake levels

Chance %	90%	50%	10%
Elevation ft-msl	1451.7	1451.8	1452.5
Volume ac-ft	290,400	308,000	437,000

DLF:BE:EGC:mmm/416-10



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Aqueduct

MEMORANDUM

TO: Governor John Hoeven
State Water Commission Members
FROM: *DLF* Dale Frink, State Engineer
SUBJECT: Devils Lake Outlet Project Update
DATE: May 17, 2010

A tremendous amount of work has been completed on construction of the outlet upgrade in the last five months through difficult conditions. The intake structure with thirty-foot high walls has been completed. Due to the close proximity of the structure to Round Lake, ground water problems hampered the deep excavations required to install the pump cans. Pump cans at the Josephine pump location were also installed with boulders delaying completion of the drilling. Three of the 4 new pumps have arrived on site. The fourth pump is to be delivered on May 17th. The gravel filter/transition structure was a complicated structure to complete involving reinforced concrete, pre-cast concrete, plastic pipe and gravel. The plunge pool construction at the outlet of the terminal structure was delayed due to high stages in the Sheyenne River, but it has been completed. The project also involved several miles of power poles and power line construction, which has been completed by Central Power. An operator's building has been built.

The existing two-50 cfs pumps at Round Lake and Josephine locations are anticipated to be operational next week. The plan is to run the existing pumps to the 100 cfs capacity until mid-June when the two-75 cfs pumps at each location can be operated, providing a 250 cfs maximum capacity.

The emergency rule allowing Devils Lake releases to the upper Sheyenne River with sulfate concentrations of 750 mg/L expired in January 2010. The emergency rule could be enacted again. The drainage permit for the upgraded outlet has been reviewed by the Devils Lake basin water boards. It is being processed by State Engineer staff at this time.

The United States Geological Survey (USGS) has developed a two-dimensional model to predict movements of sulfate concentrations within Lake Ashtabula. Sampling locations on Lake Ashtabula have been determined in order to provide for accurate data on water quality for the reservoir. The water samples will provide for accurate calibration of the model. The model will assist the State Water Commission staff in adjusting the discharge to comply with the water quality standards set forth by the North Dakota State Health Department.

DLF:BE:EGC:mmb/416-10




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Agenda #3

MEMORANDUM

TO: Governor John Hoeven
North Dakota State Water Commission Members

FROM:  Dale L. Frink, State Engineer

SUBJECT: Devils Lake Outlet – Sheyenne River Biological Assessment Consultant Contact

DATE: May 17, 2010

In 2004 at the request of the ND Department of Health, prior to operating the Devils Lake Outlet, a biological assessment was conducted of the Sheyenne River to establish environmental baseline conditions of the Sheyenne River. The Devils Lake Outlet has been operating for several years and based on discussions with the ND Department of Health another biological assessment survey must be conducted to collect additional environmental data to document and analyze the environmental conditions and parameters of the Sheyenne River.

The State Water Commission does not have the technical expertise in-house to conduct this type of biological field survey and analysis. The US Geological Survey (USGS) has extensive technical expertise in conducting this type of survey. The USGS has a highly qualified staff with the training and experience necessary to conduct the survey using methods that are accepted by the scientific community. The USGS was contacted to see if they would be willing to conduct the field survey and develop the assessment for the State Water Commission. The USGS stated that they would be able to do the biological assessment and provided the attached proposal.

The biological assessment will consist of sampling and biological analysis of 4 sites on the Sheyenne River. The site locations include: 1) upstream of the insertion point; 2) downstream of the insertion point (approximately one mile); 3) just upstream of Lake Ashtabula; and 4) near the confluence with the Red River. Three reaches of the river will be sampled within each site and each assessment will include three biological assemblages involving macro invertebrates, fish, and periphyton, in addition to a physical habitat assessment. The field procedures will follow US Environmental Protection Agency's Environmental Monitoring and Assessment Program for the Western States. Data from each river reach will also be analyzed for chemical and physical constituents.

Macro-invertebrate identification will be contracted with Valley City State University. The assessment data and analysis will be used to document current environmental conditions. The biological assessment will be used as additional baseline information to compare the assessment

to any subsequent assessments that must be completed on a periodic basis as deemed necessary by the ND Department of Health Department.

The fieldwork is expected to begin in late August to mid-September 2010. The collected samples will be analyzed, the data interpreted and evaluated, and a draft report detailing the study results will be available for review and comment in early 2011. It is anticipated that the final report will be available sometime in early 2011.

The cost of the Devils Lake Outlet/Sheyenne River Biological Assessment involving the field survey, data analysis and report writing is estimated at \$197,510. The State Water Commission will contract macro-invertebrate identification associated with this study directly with Valley City State University. The cost of the macro-invertebrate identification is estimated at \$2,700; for a total cost of \$200,210.

In addition to this survey, another biological survey specific to mussels will need to be conducted. Mussels are very susceptible and sensitive to environmental changes and are often utilized to monitor and detect early changes in a riverine ecosystem. As a result, mussels are considered "indicators" species that respond rather quickly to environmental and habitat changes taking place in a riverine ecosystem. Currently, an interagency scientific team is developing the study protocols, methods, and site locations for the mussel survey and analysis. The costs associated with the mussels survey have not been determined at this time. State Water Commission members will be provided with the information and a request for the mussel survey funding as soon as an estimated cost has been developed.

The Devils Lake Outlet/Sheyenne River Biological Survey is necessary to document and monitor environmental parameters of the Sheyenne River and is information that is required to develop and expand upon baseline scientific data. It will provide information that will assist in monitoring biological conditions associated with the Sheyenne River and operating the Devils Lake Outlet.

I recommended that the State Water Commission contract with the USGS in the amount of \$197,510 and with Valley City State University in the amount of \$2,700 to conduct the Biological Assessment of the Sheyenne River and prepare the report for the State Water Commission to document, monitor and expand data collection involving Sheyenne River environmental conditions.

DF:LW:dp/416-10

Attachment 1



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
 North Dakota Water Science Center
 821 East Interstate Avenue
 Bismarck, ND 58503

May 15, 2010

Bruce Englehardt, Water Development
 Linda Weispenning, Water Resource Planner
 North Dakota State Water Commission
 900 East Boulevard Avenue
 Bismarck, ND 58505-0850

Dear Bruce and Linda,

As per discussions with you and personnel from the North Dakota Department of Health and North Dakota Game and Fish Department, we have redrafted the proposal and expanded the budget categories for the Sheyenne River assessment and sampling for September 2010. The work in September will not contain any mussel work.

The North Dakota Department of Health will analyze the water-quality samples. The North Dakota State Water Commission will contract directly with Dr. Andre DeLorme at Valley City State College for the analyses of the macroinvertebrates. The USGS will contract directly with an independent lab for the remaining sample analyses. The USGS will be responsible for the fish analyses.

The budget for FY2010 and FY2011 is:

	FY2010	FY2011	Total
Personnel	86,160	43,500	129,660
Travel/Vehicles	29,500	0	29,500
Supplies/Equipment	9,910	9,840	19,750
Lab costs	0	18,600	18,600
Total	125,570	71,940	197,510

Enclosed are the proposal and budget for the work discussed and an attachment describing the site locations and sampling work to be completed. If you have any questions, please contact Kathleen Rowland at 701-250-7418 or myself at 701-250-7402.

Sincerely,

A handwritten signature in cursive script that reads "Joel Galloway" followed by the initials "JMR".

Joel M. Galloway
Chief of the Hydrologic Studies Section

Enclosures: 3 copies

FY2010 – FY2011

USGS / Cooperator Proposal:

Devils Lake Outlet – Sheyenne River Biological Assessment

USGS North Dakota Water Science Center

Project Title: Devils Lake Outlet – Sheyenne River Biological Assessment

Project Duration: FY2010 - 2011

USGS Lead Science Center: USGS North Dakota Water Science Center
(USGS NDWSC) Gregg Wiche; Joel Galloway;
Kathleen M. Rowland

Main Cooperators: North Dakota State Water Commission (NDSWC)
Bruce Englehardt; Linda Weispenning

North Dakota Department of Health (NDDH)
Dennis Fewless; Mike Ell; Mike Sauer

North Dakota Game and Fish (NDG&F)
Terry Steinwand; Steve Dyke; Greg Powers; Scott Elstad

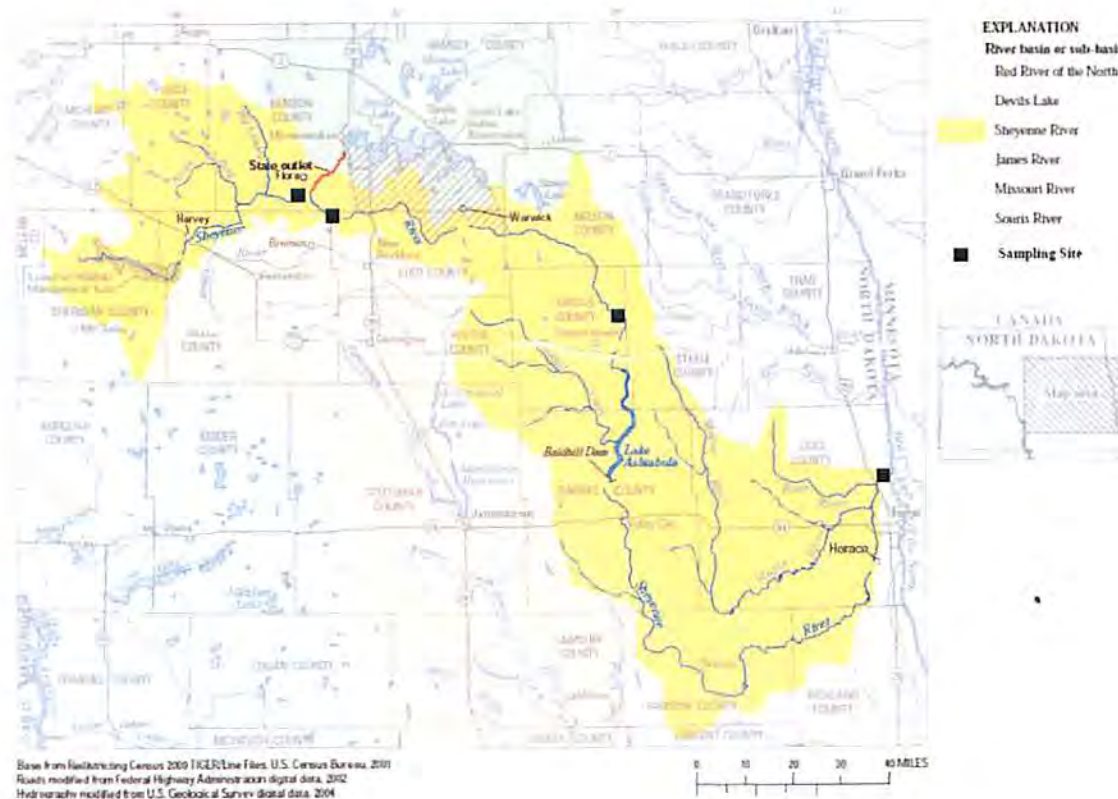
Technical Priorities / Background--The Devils Lake Basin is a 3,810-square-mile (mi²) closed basin in the Red River of the North (Red River) Basin, in North Dakota. About 3,320 mi² of the total 3,810 mi² is tributary to Devils Lake; the remainder is tributary to Stump Lake. The Devils Lake Basin contributes to the Red River Basin only when the level of Devils Lake is greater than 1,458 feet (ft) above sea level (asl). At an elevation of 1,446.5 ft asl, Devils Lake begins to spill into Stump Lake; and at an elevation of about 1,458 ft asl, the combined lakes begin to spill through Tolna Coulee into the Sheyenne River. The Sheyenne River is one of the main tributaries to the Red River of the North in east-central North Dakota.

The continued rise of Devils Lake in the last decade has caused homes and businesses to be flooded, transportation infrastructures to be compromised, and hundreds of millions of dollars in damages to the area. To control the flow from Devils Lake into the Sheyenne River, the State of North Dakota constructed an outlet west and south of Devils Lake.

As the outlet will help control the flow of water from one basin to another basin, it causes another concern – water quality. Water quality in Devils Lake Basin is different from the water quality in the Sheyenne River. Potential changes in the water quality of the Sheyenne River, and thus the ecology of the river, are of concern to many people who live downstream of the outlet - particularly those people living along the Red River of the North in the United States and Canada. To develop a sound management plan for the Devils Lake outlet, ecological and water-quality conditions need to be determined prior to the release of substantial amounts of water from the Devils Lake Basin.

State Goals—Ecological conditions of the Sheyenne River will be determined through surveying, assessing, and data collecting in four sites / reaches of the Sheyenne River. The reaches to be sampled are: 1) upstream of the outlet insertion point on the Sheyenne River; 2) downstream of the outlet insertion point on the Sheyenne River [approximately one mile from the outlet]; 3) immediately upstream of the headwaters of Lake Ashtabula; and, 4) near the confluence with the Red River of the North. [Note: Sites locations are from a previous study. Landowners permitting, every attempt will be made to sample at same locations. If not possible, USGS will consult with the cooperators for alternate sites. See attachment A].

Three reaches will be sampled within each river site locale. Each assessment will include field parameters for water, water-quality samples, three biological assemblages (macroinvertebrates, fish, periphyton) and physical habitat and channel assessment. [Note: the presence of mussels will be noted but no extended mussel work will be done during this study.] The biological assessment includes: 1) field survey work; 2) data collection; 3) recording and analysis of data collected; and 4) report writing. [See attachment A].



Map of Sheyenne River Basin and sampling sites

Field procedures to be used are from the guidelines established for the USEPA Environmental Monitoring and Assessment Program for the Western States (EMAP Western Pilot Study). Depending on the current flow and stage at the time of sampling, either wadeable or non-wadeable protocols will be followed.

USGS NDWSC approach --The USGS NDWSC will: 1) identify each site and sample reach; 2) contact landowner / leaser for permission to sample; 3) collect data and samples from established locations; 4) prep and deliver samples to the appropriate labs; 5) analyze data and sample results; and 6) report findings to the State.

USGS interdisciplinary approach and goals – none identified for current project description.

Technical and Scientific Benefits / Merit--The USGS NDWSC and the cooperators will benefit from this project by: 1.) developing greater knowledge of the Sheyenne River system; 2.) expanding scientific data collection background and capabilities; 3.) expanding USGS NDWSC data bases to include unique data sets.

Products – A data analysis report will be provided in 2011.

Budget – Budget contains work for two years (FY2010, FY2011).

FY2010 work will include: prep work for data collection, site recon, data collection, sample prep and delivery to respective labs, some lab analyses, and preliminary data entry and review.

FY2011 work will include: remaining lab and data analysis, data entry and review and final report.

	FY2010	FY2011	Total
Personnel	86,160	43,500	129,660
Travel/Vehicles	29,500	0	29,500
Supplies/Equipment	9,910	9,840	19,750
Lab costs	0	18,600	18,600
Total	125,570	71,940	197,510

ATTACHMENT A

Devils Lake - Sheyenne River Reaches Biological Assessment Summer 2010

1. Original Site Locations

a. Upstream of Devils Lake Outlet (3 reaches)

i. Maddock, ND

1. upstream reach	47 54.410	99 25.405	elev. 1427 ft
2. middle reach	47 54.456	99 25.231	elev. 1421 ft
3. downstream reach	47 54.373	99 25.170	elev. 1418 ft

b. Between Devils Lake Outlet and Lake Ashtabula Headwaters (6 reaches)

i. Sheyenne, ND

1. upstream reach	47 49.431	99 17.198	elev. 1417 ft
2. middle reach	47 49.269	99 16.789	elev. 1415 ft
3. downstream reach	47 49.255	99 16.778	elev. 1410 ft

ii. Cooperstown, ND

1. upstream reach	47 32.550	99 02.760	elev. 1300 ft
2. middle reach	47 32.559	98 03.124	elev. 1295 ft
3. downstream reach	47 32.445	98 02.938	elev. 1300 ft

c. Downstream of Baldhill Dam to mouth of Sheyenne River (3 with possible 2010 site additions to this river section)

i. West Fargo, ND

1. upstream reach	46 50.505	96 54.330	elev. 891 ft
2. middle reach	46 50.655	96 54.257	elev. 890 ft
3. downstream reach	46 50.610	96 54.029	elev. 886 ft.

2. Site Locations pending Land Owner Contact / Consent [pending consent from landowners/leasers – if no consent is obtained for access to original sites, location adjustments will be made after discussions with cooperators]

a. Upstream of Devils Lake Outlet (3 reaches)

i. Maddock, ND

1. upstream reach	47 54.410	99 25.405	elev. 1427 ft
2. middle reach	47 54.456	99 25.231	elev. 1421 ft
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b. Between Devils Lake Outlet and Lake Ashtabula Headwaters (6 reaches)

i. Sheyenne, ND

1. upstream reach	47 49.431	99 17.198	elev. 1417 ft
2. middle reach	47 49.269	99 16.789	elev. 1415 ft

3. downstream reach 47 49.255 99 16.778 elev. 1410 ft.
- ii. Cooperstown, ND
 1. upstream reach 47 32.550 99 02.760 elev. 1300 ft
 2. middle reach 47 32.559 98 03.124 elev. 1295 ft
 3. downstream reach 47 32.445 98 02.938 elev. 1300 ft.
- c. Downstream of Baldhill Dam to mouth of Sheyenne River (3 reaches with possible 2010 site additions to this river section)
 - i. West Fargo, ND
 1. upstream reach 46 50.505 96 54.330 elev. 891 ft
 2. middle reach 46 50.655 96 54.257 elev. 890 ft
 3. downstream reach 46 50.610 96 54.029 elev. 886 ft.

3. Reach Description

- a. Reach length – 40 times mean wetted width of channel (minimum = 150 m with a maximum not to exceed 5000 m)
- b. One “X”-site (located at “F” transect when possible) and 11 equal transects (A through K)
- c. Photographs taken upstream, downstream, and looking across stream at X sites; additional photos of unique stream/habitat condition.

4. Reach Discharge

- a. One ADP/discharge measurement at “X”-site (located at “F” transect when possible) or at transect A
- b. USGS discharge and stage data from nearest upstream USGS streamflow gaging station

5. Water Chemistry Sampling

- a. Instream field parameters – USGS YSI / Hydrolab readings at A or F (X site) transects
 - i. Water temperature
 - ii. pH
 - iii. Dissolved oxygen
 - iv. Conductivity

- b. QW samples collected by USGS – Analyses by NDDH lab
 - i. Total dissolved solids NDDH Analysis 173
 - ii. Ammonia NDDH Analysis 30
 - iii. Nitrate/nitrite NDDH Analysis 30
 - iv. Total Kjeldahl nitrogen NDDH Analysis 30
 - v. Total phosphorus NDDH Analysis 30
 - vi. Dissolved phosphorus NDDH Analysis 160
 - vii. Total suspended solids NDDH Analysis 118
 - viii. Major ions NDDH Analysis 5
 - ix. Trace metals NDDH Analysis 7
 - x. Chlorophyll A & B NDDH Analysis 105
- xi. QA/QC samples – 4 duplicates (once at each of the current site locations)
- xii. Blank samples – 4 trip blanks (obtained from NDDH?)

6. Biological Sampling

- a. Periphyton – USGS on site / independent lab
 - i. Composite sample (from samples collected from all transects in reach)
 - ii. Voucher sample
- b. Benthic macroinvertebrates – USGS on site / Andre DeLorme for analyses
 - i. Composite sample (from sample collected from all transects in reach using zig-zag pattern of left – center – right as moving from transect to transect)
 - ii. Voucher sample
- c. Fish – USGS on site / no lab
 - i. Need permit from NDGF
 - ii. Identify and count fish species
 - iii. Get weight / length
 - iv. Note and/or photograph any “delts” on individual fish
 - v. Voucher species
- d. Mussel – note presence at sites
- e. QA/QC samples – 1 from each site

7. Physical Habitat

- a. Channel cross-section
 - i. Dimensions
 - ii. Gradient
 - iii. Stream channel substrate
- b. Bank morphology
- c. Riparian assessment
- d. Legacy trees and invasive species
- e. Macrohabitat and shoreline type
- f. Channel and general assessment – human influences (watered activities; general disturbances and comments)



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Agenda #1

MEMORANDUM

TO: Governor John Hoeven
Members of the State Water Commission
FROM: Dale L. Frink, State Engineer
SUBJECT: NAWS – Project Update
DATE: May 17, 2010

Manitoba & Missouri Lawsuit

The Federal Court issued a new order on March 5, 2010, requiring Reclamation to take a hard look at (1) the cumulative impacts of water withdrawal on the water levels of Lake Sakakawea and the Missouri River, and (2) the consequences of biota transfer into the Hudson Bay Basin, including Canada. Our motion for summary judgment and to lift the injunction was denied.

On April 2, 2010, both Federal and State filed requesting reconsideration of the first part of the order dealing with water withdrawals, and Federal requested the filings against the Corps of Engineers be dismissed from the case. On April 14, Missouri filed in opposition to both the State and Federal request for partial reconsideration. Manitoba did not file. By May 7, both State and Federal filed responding to Missouri's opposition. The Federal Court is now reviewing the filings and we may see a response back in the next few weeks.

The result of the March 5, 2010 Order is additional environmental work will need to be completed by the Bureau of Reclamation. Public notice of a Supplemental Environmental Impact Statement will be issued in the federal register and public scoping will be the start of the process.

About two weeks after the March 5th Order, the Federal Court granted the State's earlier Motion to modify the injunction. The Federal Court on March 18th allowed the State to complete design work on the piping and filtration system in the Minot Water Treatment Plant. The design work has been started and will be completed around October of this year. A request will need to be filed with the Federal Court to allow construction of this project, and the work needs to be completed during the winter when the system has lower water demands.

Design and Construction Update

Table 1 - NAWS Contracts under Construction				
Contract	Contract Award	Contractor	Contract Amount	Remaining Obligations
4-2A HSPS	4/24/08	John T. Jones, ND	\$12,411,087.61	\$281,006.58
5-2C Storage	3/27/09	Caldwell Tanks, KY	\$1,841,000.00	\$382,288.75

2-2C Kenmare	10/1/08	Northern Improvement	\$4,853,166.87	\$164,764.63
2008-1 Upham	11/10/08	Swanberg Construction	\$687,916.13	\$34,396.13
2-2D Mohall	7/24/09	American Infrastructure, CO	\$5,113,868.00	\$3,148,961.55
2-2E Burlington	11/13/09	Steen Construction & Associates Inc, ND	\$471,782.00	\$314,306.30
Total Remaining Construction Contract Obligations				\$4,325,723.94

Table 2 – Design Work on Upcoming NAWS Construction Contracts		
	Bid Opening Planned	Contract Cost Estimate
2-3A Minot Air Force Base & 2-3B Upper Souris	Fall 2010	\$15.4 million
7-1A Filtration & Piping in Minot WTP	-	-

Contract 4-2A - The 18 MGD High Service Pump Station and 2 million gallon reservoir were awarded to John T. Jones Construction, Fargo, ND. The pump station has been operational since December 2009. Substantial completion has not been provided as the valve actuators have not been installed and commissioned. The first mediation ended unresolved. John T Jones filed notice of intent to file suit on that issue. A second mediation, involving the lack of valve actuators delaying commissioning, was completed on April 19 and a memorandum of understanding has been signed addressing the first and second issue. A Settlement Agreement based on the MOU will be presented to the State Water Commission. The contractor's schedule is to finish the remaining work by the end of May, with the exception of the Automatic Transfer Switch for the generator which is a State requested change that is still being scoped.

Contract 2-2C – The contract includes 52 miles of 10"-12" pipeline for the Kenmare-Upper Souris pipeline. The contract was awarded to Northern Improvement on October 1, 2008. The substantial completion letter was signed on November 20th. Water service to Kenmare was started on December 7, 2009. Water service to Upper Souris Water District at the Donnybrook turnout started December 22, 2009. Seed bed preparation and seeding needs to be completed within the next couple of weeks. Contract closeout is expected following seeding.

Contract 2008-1 –The NAWS portion of this All Seasons contract includes 13 miles of 6 inch and 10 inch pipeline between the All Seasons water treatment plant and Gardena, ND. The NAWS portion of this line has been in service since September 2009. Seeding should be completed in the next couple of weeks. Contract closeout is expected following seeding.

Contract 5-2C - The contract includes a 1 million gallon storage reservoir near Kenmare. The welded tank was lifted in place on the concrete pedestal on November 18, 2009. There are areas of welding that need to be cleanup to prepare for coatings. Coating will be started this week on

the floor, and the roof portion needs additional cleanup prior to coating. The electrical work inside the tank is about 75% complete. Substantial completion is July 1, 2010.

Contract 2-2D - The contract covers 62 miles of pipeline for the Mohall/Sherwood/All Seasons pipeline. The contract was awarded to American Infrastructure, Colorado. As of the end of November, 14 miles of 12-inch line and 13 miles of 6-inch line had been installed when they shut down for the winter. Work resumed the week of May 3 on the bores and the week of May 10th the pipe crews resumed work. An additional 1.5 miles 8" and 12" have been installed this month. Substantial completion is October 15, 2010, with final completion November 15, 2010.

Contract 2-2E - The contract covers connection of the connection of Burlington and West River Water and Sewer District to the NAWS pipeline. The contract was awarded to Steen Construction & Associates on November 13, 2009. The pipeline connection the water treatment plant to the West River pipeline has been completed. The Highway 52 bore will be completed this week. The vault delivery is planned for June 4th. Water service to Burlington and West River Water District could start in July 2010.

Design on Contract 2-3A - The 60% design review was completed on May 5. This project was originally planned to include approximately 32 miles of pipeline north of Minot, connecting the Minot Northhill, Minot Air Force Base, and Upper Souris Water District (which in turn serves the cities of Glenburn and Lansford.) The Contract 2-3A portion of larger 24" pipe south of the base is being split from the smaller 16"-18" pipe planned for north of the base connecting the Upper Souris Water District which is now Contract 2-3B. We are looking at a fall bid opening for Contract 2-3A.

Design on Contract 2-3B - The 30% design review was completed on April 22. Houston Engineering is contacting landowners to finalize the route and the turnout locations. This project is also planned for a fall bid opening.

Design on Contract 7-1A - The Federal Court on March 18th approved additional design work in the Minot Water Treatment Plant with the piping and filters. The 30% design review will be completed in June/July. The plans and specifications should be ready for advertisement in October 2010. Construction on this project cannot proceed without the Federal Court approval.

Water Service Contracts Update - The State Water Commission finalized and signed water service contracts with West River Water District and Burlington in May.

Operation and Maintenance Update - The State Water Commission is currently advertising for a NAWS distribution system operator. The vacancy announcement closes on June 11, 2010.

In March 2010, the NAWS project delivered 867,000 gallons to Berthold; 2,259,000 gallons to Kenmare; 516,000 gallons to Upper Souris at Donnybrook; and Minot delivered 105,000 to North Prairie Water District turnouts on the NAWS line.




North Dakota State Water Commission

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Agenda (2)

MEMORANDUM

TO: Governor John Hoeven
Members of the State Water Commission
FROM:  Dale L. Frink, State Engineer
SUBJECT: NAWS – Contract Settlement
DATE: May 17, 2010

A settlement of issues is being presented relating to the 18 MGD High Service Pump Station and 2 million gallon reservoir (Contract 4-2A) for the NAWS project that was awarded to John T. Jones Construction, Fargo, ND.

The contractor submitted a half million-dollar claim, the claim was denied by Houston Engineering. A mediation session was held on May 4, which resulted in a timeframe for requesting and answering additional questions. A second mediation session was held on August 24, 2009, and no agreement was reached however the parties continued discussion. The settlement agreement was under negotiation and was presented to the State Water Commission for approval at the December 11th meeting, however the settlement was not signed within our timeframe and we issued notice that the mediation was unsuccessful. The Contractor then filed notice of intent to file suit on that issue.

John T. Jones presented a second issue for mediation, involving their lack of installation of valve actuators delaying commissioning. Houston Engineering also denied this claim. A third mediation was completed on April 19 and a Memorandum of Understanding was signed addressing the first and second issue. A Settlement Agreement based on the MOU is being presented to the State Water Commission for approval. The terms are very similar to where we ended the first mediation issue, however payment by the State Water Commission and engineering firms will not be made until the contractor has completed all work. The contractor also agreed to complete additional work on the generators and additional programming to allow the city to operate the treatment plant on flow rather than pressure during the interim. We were concerned if we completed this work outside of the contract, it could affect warranties.

I recommend the State Water Commission authorize the Chief Engineer-Secretary to sign the settlement agreement with John T Jones Construction to resolve claims on Contract 4-2A NAWS High Service Pump Station.

MK:mmb/237-4